

Monitoring compliance with environmental protection legislation by suppliers and contractors [GRI 308-1¹]

Inter RAO strives to ensure that its suppliers, contractors and subcontractors comply with environmental laws, primarily by including a clause on the need to comply with environmental legislation in the text of the agreements it concludes. The contractor is liable in the form of fines for violations of environmental standards. Individuals standard contract forms contain a section on environmental requirements. For example, the standard form of a contract for repair work contains Section 16 'Environmental Requirements', which regulate, among other things, waste management activities.

In an effort to monitor compliance with environmental legislation and the environmental conditions of contracts, Inter RAO experts conduct technical audits of suppliers during which they determine whether suppliers have ISO 14001 certification, among other things. During audits conducted both by a commission or solely by environmental specialists, the activities of contractors are checked for compliance with environmental laws when conducting work on the territory of a separate facility, in particular. If violations are found, the inspectors record them in their inspection report, which is sent to the head of the workshop responsible for the site at which the work was performed. The Company does not keep records of all suppliers that have undergone an environmental audit.

GREENHOUSE GAS AND AIR POLLUTANT EMISSIONS

Policy to reduce greenhouse gas and air pollutant emissions

The assessment of greenhouse gas emissions and harmful emissions into the atmosphere is an integral part of the industrial environmental control system for atmospheric air and is carried out on an annual basis for all the Group's generating facilities.

The data on greenhouse gas emissions contained in the 2018 annual report was certified by an international auditor for the first time in accordance with International Standard 3410 'Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board, and an opinion on the certification was received on December 20, 2019².

Environmentally sustainable production is a key principle

Risk appetite: Inter RAO annually provides assurances regarding carbon reporting (verifies) direct greenhouse gas emissions, including CO₂

In late 2019, the Board of Directors approved the PJSC Inter RAO Innovative Development Program for the Period of 2020-2024 with a View to 2029³ in which one of the key efficiency targets for innovative development is to ensure that specific CO₂ emissions per unit volume of production does not exceed 445.3 g of CO₂/kWh by 2020 and does not exceed 441 g of CO₂/kWh by 2029.

¹ Management Approach: Monitoring compliance with environmental legislation by suppliers and contractors

² https://www.interrao.ru/upload/Zakluchen_deloyd_vibros_PG_IRAO_2018.pdf

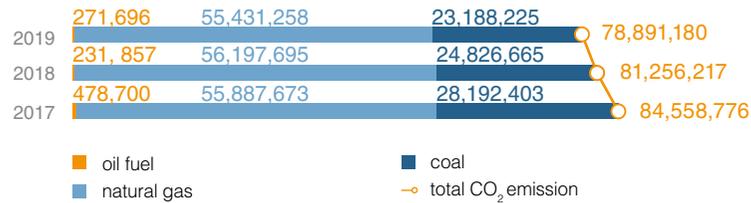
³ Approved by a resolution of the Board of Directors (Minutes No. 262 dated December 23, 2019).

Greenhouse gas emissions [GRI 305-1, 305-4]

Greenhouse gases are measured in accordance with the Guidelines and Manual for the Quantification of Greenhouse Gas Emissions by Organizations Operating in Russia, which was approved by Order No. 300 of the Russian Ministry of Natural Resources dated June 30, 2015.

Thanks to a wide range of measures taken, Inter RAO reduced direct greenhouse gas emissions by 15.3% and 2.9% compared with the 2014 level (adopted as the baseline)¹ and the 2018 level, respectively. The Group's gross greenhouse gas emissions² amounted to 78.9 mln tons³ in 2019. Specific greenhouse gas emissions amounted to 446 g of CO₂/kWh in 2019, down by 0.67% co

Structure of direct CO₂ emission by the fuel burned, t [GRI 305-1]⁴

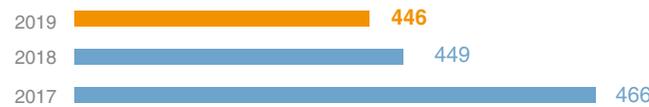


Main reasons for a reduction in greenhouse gas emissions:

- An economically justified increase in the share of medium and high power condensing and co-generation CCGTs and gas turbines in the structure of gas generation generating capacities (including using Russian gas turbine engines) with energy efficiency (efficiency rate or specific fuel consumption) and environmental safety indicators (specific emissions) at the level of the best world analogues.
- Improving the energy efficiency of equipment as part of the Energy Conservation and Efficiency Improvement Program.

In 2020, the sale of the coal-fired Ekibastuzskaya TPP2 with installed capacity of 1,000 MW in December 2019 will be one of the additional factors for reducing greenhouse gas emissions within the Group.

Specific greenhouse gas emission per unit of energy produced, g CO₂ / kWh [GRI 305-4]



¹ 2014 was taken as the baseline year for calculating the decrease in greenhouse gas emissions since in 2015 direct greenhouse gas emissions were measured for the first time in accordance with the Guidelines and Manual for the Quantification of Greenhouse Gas Emissions by Organizations Engaged in Economic and Other Activities in the Russian Federation, which was approved by Order No. 300 of the Russian Ministry of Natural Resources dated June 30, 2015. Direct CO₂ emissions by Inter RAO facilities amounted to 93.149 million tons.

² When referring to greenhouse gas, the company only means carbon dioxide. Emissions of other greenhouse gases are not taken into account due to their insignificance.

³ Including CO₂ emissions by Ekibastuzskaya TPP-2.

⁴ Gross greenhouse gas emissions from fixed fuel combustion sources underwent the procedure of external certification for 2018 and 2019 in accordance with International Standard on Assurance Engagements 3410.

Air pollutant emissions [GRI 305-7]

Among all types of power generation, coal generation during the combustion of coal fuel produces the largest amount of air pollutant emissions. It should be noted, however, that there has been a change in the fuel balance structure of the Group's generating assets as the share of gas fuel has increased.

The modernization of generating facilities has contributed to a reduction in air pollutant emissions. In an effort to reduce air pollutant emissions, the Inter RAO Group has taken measures to increase the efficiency of dust extraction plants, which has helped to capture solid particles more efficiently. Moreover, generating facilities are equipped with continuous emission control systems in order to prevent negative effects.

As a whole, the level of various pollutant emissions has decreased compared with 2018. Only the level of NO_x emissions increased slightly in 2019, up by 1.4% to 120,000 tons, while the level of SO_x emissions decreased by 7.2% to 136,000 tons. Despite localized cases, there has been a positive trend overall in greater fuel efficiency. Decreased production of electricity and coal-fired heat was the main factor in the reduction of specific air pollutant emissions.

The mass of pollutant emissions has also declined due to the systematic implementation of the Energy Conservation and Energy Efficiency Improvement Program, as evidenced by the reduction in specific fuel consumption per unit of electric and thermal power generated. A 3.7% reduction in solid emissions in 2019 resulted from such activities as the maintenance of dust extraction plants, for example, at the Kharanorskaya and Gusinoozyorskaya TPPs, and the reconstruction of the dust extraction plant with the installation of second generation emulsifiers at Tomskaya TPP-2.

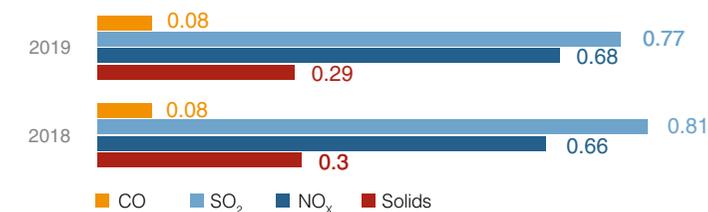
Air emission of NO_x and SO_x, thousand t [GRI 305-7]



GRI305-7. Air emissions of other significant pollutants

Pollutant type	2017	2018	2019	Change vs. 2018, %
Persistent organic pollutants (PCB emissions) ¹	-	-	-	-
Volatile organic compounds, thousand tons	0.24	0.27	0.21	-21.6%
Hazardous air pollutants (benzo[a]pyrene), kg	54.4	49.8	37.6	-24.6%
Solids, thousand tons	54	54	52	-3.7%
CO (carbon monoxide), thousand tons	14	15	15	-4.2%

Specific pollutant emissions vs. energy production



¹ No substances containing PCBs were found on the Group's equipment. Inter RAO conducted an inventory based on the Guidelines for the Inventory of Equipment, Materials, and Waste Containing Polychlorinated Biphenyls, which was approved by Order No. IRAO/8-r dated May 27, 2015.